SUBJECT INDEX

Vol. 107*A*, *Nos* 1–4

Abomasal mucosa, 73
Acetogenesis, 113
Acoustic responsiveness, 469
Acridine orange, 133
ACTH, 523
Action potential plateau, 459
Active transport, 289
Adaptation, 357
Adaptive radiation, 403
Adipocyte size, 195
AEP, 469
Age, 333
Aeshna cyanea, 553
Air-gaping, 1
Alimentary pools and concentrations, 563
Alkalinity, 597
αKG, 141
ALT, 343
Amino acid, 589, 719
Ammonia, 149
α-Amylase, 187
Amylolysis, 221
Anaerobic capacity, 63
Anaerobiosis, 1
Anaesthesia, 49
Anas discors, 63
Androstenedione, 261
Angiotensin II, 545
Anguilla anguilla, 133
Antarctic summer, 81
Antennal gland, 349
Antennary gland, 349
Antibacterial defense, 529
Antithrombin III, 277
AP, 343
Aphrophora saratoga, 679
Aplysia, 487
Aquatic surface respiration, 403
Arachidonic acid, 699
Ardea purpurea, 337, 343
Arginine vasopressin, 57
Arginine vasotocin, 23
Arion ater, 621
Arion lucitanicus, 621
Aristichthys nobilis, 101
Artemia, 699
Arterioles, 43
AST, 343
AVT, 493, 545

Bacterial injection, 529
17βC, 171
Bidder's organ, 171
Binding sites, 101
Blood, 413
Blood chemistry, 81
Blood parameters, 641
Blue crab, 349
Bone resorption, 233
Brackish water adaptation, 397
Brain glycogen, 727
Brain pH, 307
Brainstem, 469
Brown adipose tissue, 381
Browse, 425
Brush border, 133
Brush border membrane vesicles, 685
Bubulcus ibis, 337, 343
Bufo bufo, 171

Calcium, 31, 369, 563
Calcium channels, 473
Calcium-paradox, 369
Calliactis polypus, 31
Callinectes sapidus, 349
Calorimetry, 451
cAMP, 375
Carassius auratus, 469
Carbohydrate metabolism, 237
Carbon dioxide, 113
Carbon dioxide supplementation, 603
Carcinus maenas, 289
Cardiac output, 501
Cardiodynamics, 537
9-*cis* β-Carotene, 203
Casein, 433
Catfish, 43
Cavia cobaya, 13
Cell swelling, 73
Cell volume, 337
Cercal filiform sensilla, 357
Cercus, 357
Cerebral blood flow, 307
Chemical defence, 425
Chemotaxis, 277
Chewing, 647
Chilling, 641
Cholesterol, 81, 209, 343, 553
Chrysemys dorbigni, 727
Cichlidae, 403
Circadian, 313
Circannual, 313
Cirrhinus melitorella, 101
Clotting reaction, 37
Coagulation, 529
Coconut oil, 209
Cold exposure, 381
Collagen, 613
Columba livia, 545
Concanavalin A, 529
Cortisol, 49, 181, 397, 523
CPK, 343
Cr-EDTA, 711
Crassostrea rhizophorae, 1
Crawler mice, 419
Creatinine, 343
Crustacea, 349
Cyprinus carpio, 307

Daphnia magna, 127
Decapod, 349
Decapterus maruadsi, 101
Deer, 523
Defeathered birds, 297
Dehydrotestosterone, 171
Dephosphorylating enzyme, 597
Development, 333, 459, 647
Diabetes, 537
Diets, 433
Digestibility coefficients, 433
Digestive enzymes, 631
Digestive gland, 621

Docosahexaenoic acid, 699
Dog, 389
Dopamine, 573
Doubly labelled water, 283
Duodenal transport, 719
Duodenum, 119

Early growth, 221
Eat–fast cycles, 81
EEG, 307
Egretta garzetta, 337, 343
Eicosapentaenoic acid, 693, 699
Elaphe taeniura, 107
Electrical conductances, 73
Electromyography, 647
Eleutheronema tetradactylus, 101
Embryonic myoblasts, 301
Endurance training, 27
Energy expenditure, 451
Energy utilization, 255
Enterocyte hydrolases, 187
Epinephelus akaara, 101
Epithelial cells, 73
Epithelial permeability, 711
Epithelial responses, 85
Erythrocyte deformability, 7
Erythrocyte dimensions, 337
Erythrocyte transport, 589
Esox lucius, 69
Evaporative water loss, 451
Extrapallial fluid pH, 1

FAA, 141
Fasted rats, 589
Fasting male rats, 261
Fasting, 727
Fat body, 517
Fat pad, 195
Fatty liver, 227
Feed in zoos, 419
Feed utilization, 433
Feeding ecology, 425
Female differentiation, 171
Fish feeding, 187
Fish larvae, 693
Fishmeal, 433
Flightlessness, 63
Food composition, 187
Fossorial species, 483
Free amino acids, 249
Fresh water, 349
Frozen plasma, 661

G34, 119
Gastric emptying, 255
Gastrin, 119
Gastrointestinal development, 221
GDH, 141
Gentamicin, 473
GH, 523, 665
GI mucosae, 711
Gill Na^+–K^+-ATPase, 641
Gills, 289
Giraffe, 425
Glomerular filtration, 57
Glucose levels, 49
Glucose uptake, 301
Glucose, 81, 149, 343, 719
Glutathione, 7
Glutathione peroxidase, 245
Glycogen, 559
Glycyl-amides, 85
Golden perch, 49

Gonad, 171
Granular cells, 37
Green gland, 349
GRF, 665
Growing rats, 255
Growth, 433, 665
Growth hormone, 69, 101, 313
γ-GT, 343
Guanine, 607
Guar gum, 255
Guinea-pig, 459
Gustatory nerve responses, 85
Gut, 487

Haematocrit, 95
Haematological parameters, 413
Haemoglobin, 95, 337
Hair bundle, 473
Haliplanella luciae, 473
Hamster, 673
Heart perfusion, 501
Hearts, 501
Heat loss, 451
Heat production, 451
Heat stress, 603
Helix aspersa, 621
Helix pomatia, 323
Hemocytes, 37
Hemoglobin, 127
Herbivore plant interaction, 425
High protein diet, 237
Histones, 613
Holding time, 559
Hydroxyethylidene bisphosphonate, 233
Hypercapnia, 307
Hypercholesterolemic effects, 209
Hypostomus cf. punctatus, 43
Hypothermia, 149, 537
Hypoxia tolerance, 403

IBAT, 195
IGF-I, 665
Ileal perfusion, 333
Immune structures, 529
Immunocytochemistry, 69
Imprinting, 375
Insect immunity, 529
Insect, 357
Insulin, 375
Insulin treatment, 261
Intestinal absorption, 553
Intracellular free calcium, 655
Intracellular Na^+, 487
Intrauterine pO_2, 673
Inwardly rectified, 13
Ion fluxes, 289
Ion-permeability, 289
Isoenergetic diets, 195

Jaw movements, 647

Kidney, 133, 369
Kidney function, 493

Lactate, 27, 49, 149
Lactation, 719
Lactic acid, 73
Lampetra japonica, 23, 493
LDH, 149, 343
Lectin, 529
Leukocyte number, 337
Limax flavus, 621
Liolaemus nitidus, 581

Lipid, 559
Lipid composition, 699
Lipopolysaccharide, 37
Long-term cultivation, 613
Low lethal temperature, 641
Lysine excess, 227

Macquaria ambigua, 49
Macrobrachium rosenbergii, 597
Magnesium, 563
Manduca sexta, 529, 685
Mannitol fluxes, 73
Mannitol oxidase, 621
Mannosomes, 621
Marine invertebrate cells, 613
Mechanoreceptor, 357
Meleagris gallopavo, 559, 301
Membrane potential oscillations, 323
Metabolic rate, 283, 451
α-Methyl-DL-ρ-tyrosine, 573
Mg metabolism, 233
Microcirculation, 43
Microgale dobsoni, 283
Microgale talazaci, 283
Micrurus ibiboboca, 483
Migration, 63
Milvus milvus, 661
Miniopterus schreibersii, 439
Mink, 451
Misgurnus anguillicaudatus, 161
Mitochondria, 369
Molt, 63
Monosaccharide transport, 333
Mugil cephalus, 101
Mus domesticus, 419
Muscle, 63
Muscle contraction, 493
Muscle protein synthesis, 249
Mustela putorius furo, 157
Myelin figures, 369
Myocardium, 459
Mytilus edulis, 613

n-3 HUFA, 693
Na flux, 711
Na^+ activity, 487
Na^+/H^+ exchange, 133
Na^+/K^+ ATPase, 133
Nasutitermes walkeri, 113
Nematocyst discharge, 473
Nematocysts, 31
Nemipterus virgatus, 101
Nereis virens, 509
Nerve growth factor, 381
Neuronal blockade, 711
Neurotransmitter metabolism, 573
Neurulation, 655
Nifedipine, 473
Nigericin, 133
Nitrogen, 563
Nodulation, 529
Non-self signals, 37
Norepinephrine, 573
Northern pike, 69
Nutrient uptake, 581
Nutritional effects, 573
Nycticorax nycticorax, 337, 343

O_2 concentration, 95
Oestrogen, 673
Oestrous cycle, 673
2β-OHA, 261
6β-OHA, 261

Olfaction, 161, 463
Oncorhynchus masou, 607
Oncorhynchus mykiss, 95, 215
Oreochromis aureus, 413
Oreochromis niloticus, 641
Osmoregulation, 349, 397
Outer hair cells, 13
Outward conductances, 13
Ovine prolactin, 101
Ovis aries, 181
Oxidation, 27
Oxidative stress, 7
Oxygen consumption, 545
3-Oxy-methyl-D-glucose, 333
Oxygen-paradox, 369
Oxygen uptake, 483

Pancreatic amylase, 221
Panuliris japonicus, 37
Patinopecten yessoensis, 613
Periodontal sensation, 389
Periplaneta americana, 517, 357
Peritrophic membrane, 631
$PGF_{2\alpha}$, 161
pH, 73
Phascolosoma arcuatum, 141
Platalea leucorodia, 337, 343
Plegadis falcinellus, 337, 343
Pheromone, 161, 463
Phloridzin, 333
Phosphatidylcholine, 699
Phosphatidylethanolamine, 699
Phosphorous, 563
Pig, 647
Plasma gradient, 589
Plasma lactate, 603
Plumage insulation, 297
Polylysines, 613
Porphyrio porphyrio, 337, 343
Potassium, 563
Potassium acetate, 227
Potential differences, 73
Poults, 221
Procambarus clarkii, 349
Progesterone, 673
Prolactin, 313
Proline transport; 685
Propranolol, 57
Prostaglandins, 161, 463
Protamine, 613
Protein, 559
α1-Protein, 607
Protein digestibility, 215
Protein metabolism, 301
Protein sources, 249
Protein utilization, 255
Pseudosciaena crocea, 101
Pudu, 523
Pygoscelis antarctica, 81

Radioimmunoassay, 69
Rana dalmatina, 171
Rana pipiens, 13
Rat, 369
Rat skeletal muscles, 237
Rattus norvegicus, 419
Receptor potentials, 357
5-α-Reductase, 171
Rehydrated Bedouin goats, 57
Renal function, 57
Renal Na,K-ATPase, 349
Renal plasma flow, 57
Requirements, 693

Respiration, 403
Rhinolophus capensis, 439
Rhythmic buccal motor activity, 269
Rhythmical chewing, 389
RMR, 195

Salinity, 141, 641
Salinity dependence, 133
Salmo salar, 249
Salmon, 69
Salt and water balance, 349
Sampling blood, 413
Satellite cells, 301
Saturated fat, 209
Saurida tumbil, 101
Scophthalmus maximus, 699
Sea anemone, 473
Seasonal changes, 63, 297, 439
Seasonal variability, 509
Seasonal variations, 581
Selenium, 245
Semicircular canal hair cells, 13
Sensory neurons, 357
Sex pheromones, 161
Sexual behavior, 161
Sheep (*Ovis aries*), 233
Shivering, 545
Shore crabs, 289
Short-chain fatty acids, 73
Shunting, 501
Signal analysis, 313
Sillago sihama, 101
Skin, 43
Sloughing cycle, 107
Small fishes, 413
Smoltification, 607
Snakes, 483
Sodium, 563
Sodium absorption, 157
Sodium ion, 459
Sodium transport, 349
Soybean, 433
Soybean proteinase inhibitors, 215
Sparus aurata L, 397, 693
Species-specificity, 463
Sperm motility, 277
Spittle bugs, 679
Spodoptera frugiperda, 631
Starch, 221
Starling effect, 501
Steroidogenesis, 171
Streptozotocin, 537
Streptozotocin diabetes, 261
Stress, 141, 181, 523
Stress response, 49
Stressors, 559
Stichopus japonicus, 613
Stizostedion vitreum, 69
Stromateoides sinensis, 101
Strongylocentrotus nudus, 613

T3, 107
T_3, 607, 665
T4, 195, 107
T4:T3 ratios, 195
T_4, 607, 581, 665
Tail docking, 181
Tannin, 425
Temperature, 95
Termites, 113
Testosterone, 523
Tetrahymena pyriformis, 375
Tetrodotoxin, 459
Theophylline, 375
Thermal conductance, 297
Thermal preference, 439
Thermoregulation, 545
Thyroid hormone, 607
Thyroidectomy, 107
Tilapia, 641
Tongue, 85
Torpor, 439
Trachea, 157
Transport inhibitors, 157
Trichiurus haumela, 101
Triglyceride, 81, 149, 343
Trophocytes, 517
Trypsin activities, 215
Turbot larvae, 699
Turbot pigmentation, 699
Turkey (*Meleagris gallopavo*), 221
Turtle, 501
Typhlops reticulatus, 483

Urea, 81, 149
Uric acid, 343
Urinary dilution, 349
Urine flow, 57
Use/disuse, 63

Valinomycin, 133
Vasotocin, 545
Ventricle, 501
Venules, 43
Vitamin A, 419
Vitamin E, 419
Vulves vulpes, 661

Walleye, 69
Water loss rates, 679
Weight, 95
WKY/N-*cp* rats, 195

Young's modulus, 31

Zeitgeber, 81
Zonotrichia capensis, 297
Zona pellucida, 277

AUTHOR INDEX

Vol. 107*A*, *Nos* 1–4

Abe A. S., 483
Afuso K., 31
Agata N., 459
Aguilera J. A., 209
Alfaro V., 149
Allen P., 413
Alvarez M. C., 69
Amat J. A., 81
Aono H., 37
Aoyama Y., 227
Arai T., 245
Atomi Y., 27

Bedoyan J. K., 529
Beltrami M., 581
Ben-Amotz A., 203
Bernard R. T. F., 439
Berrini A., 313
Black D. E., 195
Blanc D., 433
Blust R., 403
Bobbin R. P., 13
Bödeker D., 73
Borromeo V., 313
Bouskela E., 43
Bozinovic F., 297
Breque J., 433
Brown C. R., 439
Brown J. H., 597
Bubenik G. A., 523
Bustamante J., 661

Candy E. J., 119
Canteras M., 95
Capella A. N., 631
Caron A., 509
Carr D. H., 119
Carragher J. F., 49
Carroll P., 469
Castillo M., 209
Cejas J. R., 693
Celdrán J., 337, 343
Chang C.-F., 641
Chen G.-R., 641
Cheng C. H. K., 101
Cherry R., 719
Chew S. F., 141
Chin-Cheng Kao, 277
Chiu K. W., 107
Choshniak I., 57
Christensen V. L., 559
Clark J., 559
Cleland S. V., 113
Cogburn L. A., 665
Connock M. J., 621
Cremonesi F., 313
Csaba G., 375

De Costa J., 95
Decleir W., 403
Desrosiers G., 509
Díaz G. G., 37
Dierenfeld E. S., 419
Donaldson W. E., 559
Douglas T. C., 419
Duncan C. J., 369
Dunn P. E., 685

Ermak A. V., 613
Erostegui C., 13
Espe M., 249

Fernandez-Llebrez P., 397
Ferreira C., 631
Ferrer M., 81
Ferrin N. H., 301
Filho V. M., 43
Flisińska-Bojanowska A., 237
Flynn M. A., 349
Franklin C. E., 501
Fumio Kawai, 307
Funakoshi M., 389
Furstenburg D., 425

Garcia-Peregrin E., 209
García-Riera M. P., 95
Gerencser G. A., 157, 487
Giesa U., 553
Gilkerson K. K., 301
Giorgi P. P., 171
Gross W. A., 181
Guillet J.-C., 357

Hamon A., 357
Hansen C. T., 195
Hara A., 607
Harumoto T., 233
Haruta K., 7
Hassinen E., 545
Hatta H., 27
Herring S. W., 647
Hessinger D. A., 473
Hidaka M., 31
Hiromasa Yoshikawa, 307
Hisanaga N., 227
Hissa R., 545
Holand Ø., 563
Höller H., 73
Holliday C. W., 349
Hortal J. H., 209
Hoven W. van, 425
Huang X., 647

Iinuma M., 389
Ip Y. K., 141
Ireland R., 517
Iturri S. J., 581
Izquierdo M. S., 693

Jørgensen L., 699

Kajiya H., 85
Kaufman D. L., 673
Kaushik S. J., 433
Kawabata T., 233
Kennelly J. J., 719
Kilgour R. D., 537
Kim M., 255
Kitamura S., 161, 463
Klemm R. D., 63
Kobayashi M., 127, 269
Koelkebeck K. W., 603
Komnick H., 553
Konno T., 245
Kononenko N. I., 323
Kovács P., 375
Krogdahl A., 215
Kurata M., 7
Kuz'mina V. V., 187
Kwan L. H. Y., 101
Kyriakides T. R., 529

Lam K. Y., 107
Laming P. R., 469
Lamy S., 73
Large A. T., 621
Latif M. A., 597
Lea T. B., 215
Lee H.-y., 655
Levin G., 203
Lied E., 249
Littlewood D. T. J., 1
Lladó I., 589
Lorenzo A., 693
Loughlin G. M., 157
Lovas G., 375
Low W. P., 141
Luczak-Szczurek A., 237

Mahler M., 73
Mancera J. M., 397
Marques M., 727
Marti T., 333
Martin J. V., 655
Martineu P., 509
Martínez F. J., 95
Masao Kanamori, 307
Matsui T., 233
McFarland D. C., 301
McKay D. M., 711
McKeown B. A., 69
McLoughlin H., 369
Michaelis IV O. E., 195
Mitchell J. A., 673
Moellers R. F., 665
Mokady S., 203
Mori K., 37
Morton J. W., 369
Motoyoshi S., 245
Murakami T., 23, 493

Nagele R. G., 655
Néchad M., 381
Ng T. B., 101
Nippo M. M., 181
Nishii T., 227
Norris C. H., 13
Novoa F. F., 297
Noy Y., 221

Odintsova N. A., 613
Odom T. W., 603
Ogata H., 161, 463
Okabe K., 85
Okine E. K., 719
Olli J. J., 215

Olsen Y., 699
Orellana M., 261

Palacios L., 149
Palomeque J., 337, 343
Palou A., 589
Partata W. A., 727
Peinado V. I., 149, 337
Pellerin-Massicotte J., 509
Peng K. W., 141
Pennino M., 419
Perdue M. H., 711
Perez J. A., 693
Perez-Figares J. M., 397
Perucchetti E., 313
Pesall J. E., 301
Petrini S., 171
Picó C., 589
Pinchasov Y., 221
Polo F. J., 337, 343
Pons A., 589
Pyörnilä A., 545

Racey P. A., 283
Rainuzzo J. R., 699
Ramage J. R., 711
Rangachari P. K., 711
Rees C. M., 49
Reitan K. I., 699
Reuveni M., 685
Reyes-Toledo E., 523
Reynolds G. W., 119
Rhodes III R. C., 181
Ricci A. J., 13
Rodriguez C., 693
Rosebrough R. W., 573
Rosenfeld J., 57
Rosenmann M., 297
Rubatta M. L., 171
Ruka E., 381

Saito N., 23
Sako T., 245
Sakudo F., 85
Sarver R. G., 349
Saunders D. K., 63
Scaps P., 509
Secchi C., 313
Servetnick D. A., 195
Shaham D., 57
Shigenobu K., 459
Shimada K., 23
Shimura T., 245
Shkolnik A., 57
Shuang-Lin Lee, 277
Simpson H. V., 119
Sitnik R., 631
Slaytor M., 113
Soeda H., 85
Soma R., 27
Spaargaren D. H., 289
Speakman J. R., 283
Spence K. D., 529
Stagni A. M., 171
Steele J. E., 517
Stephenson P. J., 283
Storelli C., 133
Sugawara M., 245
Sun L.-T., 641
Suzuki M., 7
Swenning T. A., 301

Takahashi H., 255
Takahashi Y., 127
Takashima F., 161, 463
Takeda K., 7
Tanaka H., 459
Terra W. R., 631
Thibault J., 381
Thurau K., 57
Torres Filho I. P., 43
Travaini A., 661
Trzcińska M., 237
Tsal L. G., 613
Tsutsui N., 245

Tulp O. L., 195
Turner J. S., 679

Uchiyama M., 23, 493
Ugolev A. M., 187
Ura K., 607

Valdés E., 261
Vargas M., 261
Veivers P. C., 113
Verheyen E., 403
Vilella S., 133
Villar E. D., 261
Vinardell M. P., 333
Viñuela J., 81
Viscor G., 337, 343

Wamberg S., 451
Wang T., 483
Watson G. M., 473
Wenying V. Ye, 301
Wickins J. F., 597
Williams C. M., 113
Williams P. A., 537
Witenberg C., 57

Yamamoto T., 255
Yamauchi K., 607
Yang S. I., 255
Yano H., 233
Yau-Huei Wei, 277
Yoshida A., 227
Yoshida M., 269
Yoshida S., 389
Young R. E., 1

Zaccanti F., 171
Zafra M. F., 209
Zamora S., 95
Zhang G., 647
Zonno V., 133

Typeset in Great Britain by BPC Techset Ltd, Exeter. Printed by BPC Wheatons Ltd, Exeter